

# TMAS Traffic Volume Data Recompilation and Rearrangement Tool

## Tool's Objective

The U.S. Traffic Volume Data, released through the FHWA Office of Highway Policy Information website at <https://www.fhwa.dot.gov/policyinformation/tables/tmasdata/>, is in its original database format as it is collected through the FHWA Travel Monitoring Analysis System (TMAS).

In its original data format, a day's 24-hour volumes make one record (one row). Due to historical traffic monitoring development versions, some year/month data files use fixed column width format, and other year/month data are pipe (|) separated. This version issue often requires special effort and attention from data users.

To improve data user experiences, a Python tool is developed to assist users in converting the original Traffic Volume Data through this weblink into alternative formats. Specifically, this tool offers the following functions:

1. Use a single zipped data file as an input and produces the converted data files in another zipped file.
2. Convert the input zip file to a consistent CSV format (comma separated) with a column header and zip it.
3. Convert volume records from daily format (one row per day and 24 columns for each hour of day) to hourly format (one column for the hour of day and one for the hourly volume with 24 rows).

## Background

The U.S. Traffic Volume Data in TMAS is collected in a standard format set forth by the Traffic Monitoring Guide (TMG) by all State highway agencies. The data is in a fixed column width format as described below. The FHWA Office of Highway Policy Information releases this data via the office website.

The TMG (2001) specified fixed width volume data format as listed below

Field	Columns	Length	Description
1	1	1	Record Type

2	2-3	2	FIPS State Code
3	4-5	2	Functional Classification
4	6-11	6	Station Identification
5	12	1	Direction of Travel
6	13	1	Lane of Travel
7	14-15	2	Year of Data
8	16-17	2	Month of Data
9	18-19	2	Day of Data
10	20	1	Day of Week
11	21-25	5	Traffic Volume Counted, 00:01 - 01:00
12	26-30	5	Traffic Volume Counted, 01:01 - 02:00
13	31-35	5	Traffic Volume Counted, 02:01 - 03:00
14	36-40	5	Traffic Volume Counted, 03:01 - 04:00
15	41-45	5	Traffic Volume Counted, 04:01 - 05:00
16	46-50	5	Traffic Volume Counted, 05:01 - 06:00
17	51-55	5	Traffic Volume Counted, 06:01 - 07:00
18	56-60	5	Traffic Volume Counted, 07:01 - 08:00
19	61-65	5	Traffic Volume Counted, 08:01 - 09:00
20	66-70	5	Traffic Volume Counted, 09:01 - 10:00
21	71-75	5	Traffic Volume Counted, 10:01 - 11:00
22	76-80	5	Traffic Volume Counted, 11:01 - 12:00
23	81-85	5	Traffic Volume Counted, 12:01 - 13:00
24	86-90	5	Traffic Volume Counted, 13:01 - 14:00
25	91-95	5	Traffic Volume Counted, 14:01 - 15:00
26	96-100	5	Traffic Volume Counted, 15:01 - 16:00
27	101-105	5	Traffic Volume Counted, 16:01 - 17:00
28	106-110	5	Traffic Volume Counted, 17:01 - 18:00
29	111-115	5	Traffic Volume Counted, 18:01 - 19:00
30	116-120	5	Traffic Volume Counted, 19:01 - 20:00
31	121-125	5	Traffic Volume Counted, 20:01 - 21:00
32	126-130	5	Traffic Volume Counted, 21:01 - 22:00
33	131-135	5	Traffic Volume Counted, 22:01 - 23:00
34	136-140	5	Traffic Volume Counted, 23:01 - 24:00
35	141	1	Restrictions

The following shows an example of a volume data file that is used in TMAS and released on the FHWA Office of Highway Policy Information website. In this format, each data field has its unique column with fixed width. The hourly count data for each of the 24 hours in a day takes 24 columns.

```
|3021R0001011119010720000400007000030000000010004000700060007000400020001900018000210001600026000150001600060009000150001200004000070
3021R0001011119010830005000100004000200000008000500050007000100015000140001900021000170001500090001000020000500012000100006000060
3021R00010111190109400007000400040002000050001100007000400020001500014000190001500021000210001400005000100000700013000080000300008000050
```

The following shows another example of a volume data file that is used in the released website. In this format, fields are separated by the pipe symbol (|), and each column takes the same width as what TMG specified.

3|02|1R|000101|1|1|21|12|01|4|00007|00005|00002|00003|00010|00004|00005|00009|00007|00014|00014|00015|00021|00017|00015|00011|00014|00005|00004|00010|0|3|02|1R|000101|1|1|21|12|02|5|00004|00005|00004|00000|00001|00004|00004|00010|00009|00005|00015|00008|00020|00028|00018|00018|00011|00009|00011|00009|00013|0|3|02|1R|000101|1|1|21|12|03|6|00008|00002|00004|00005|00002|00003|00005|00006|00015|00016|00028|00027|00018|00025|00021|00029|00013|00008|00016|00013|00007|0

## The Tool's Function

The tool asks for a zipped volume file (downloaded from the FHWA Office of Highway Policy Information website

(<https://www.fhwa.dot.gov/policyinformation/tables/tmasdata/>). The tool then converts it to different formats with a daily record or hourly record forms.

Once all files in the zipped file are processed, the tool will zip all produced files in one zipped file.

- A. When (*convert a day record into 24 hour records*) 24 hourly record form is chosen, the new file will be arranged as follows:
  1. Column header – the produced result files always have a column head attached as Record\_Type, State\_Code, F\_System, Station\_Id, Travel\_Dir, Travel\_Lane, Year\_Record, Month\_Record, Day\_Record, Day\_of\_Week, **Hour\_Record**, **Hour\_Volume**, Restrictions

The **Hour\_Record** and **Hour\_Volume** columns are new and created from the original input file.

2. Converted records – the converted file has created two new columns: **Hour\_Record** indicating which hour of the day the record is of and **Hour\_Volume**. In the following example, 14,00017 tells that the hour volume of hour 14:01-15:00 (2021/12/1) is 00017. Note that the Year\_Record has only two digits without the century included.

```
Record_Type,State_Code,F_System,Station_Id,Travel_Dir,Travel_Lane,Year_Record,Month_Record,Day_Record,Day_of_Week,Hour_Record,Hour_Volume,Restrictions
3,02,1R,000101,1,1,21,12,01,4,00,00007,0
3,02,1R,000101,1,1,21,12,01,4,01,00005,0
3,02,1R,000101,1,1,21,12,01,4,02,00008,0
3,02,1R,000101,1,1,21,12,01,4,03,00002,0
3,02,1R,000101,1,1,21,12,01,4,04,00003,0
3,02,1R,000101,1,1,21,12,01,4,05,00010,0
3,02,1R,000101,1,1,21,12,01,4,06,00004,0
3,02,1R,000101,1,1,21,12,01,4,07,00005,0
3,02,1R,000101,1,1,21,12,01,4,08,00009,0
3,02,1R,000101,1,1,21,12,01,4,09,00007,0
3,02,1R,000101,1,1,21,12,01,4,10,00014,0
3,02,1R,000101,1,1,21,12,01,4,11,00014,0
3,02,1R,000101,1,1,21,12,01,4,12,00015,0
3,02,1R,000101,1,1,21,12,01,4,13,00021,0
3,02,1R,000101,1,1,21,12,01,4,14,00017,0
3,02,1R,000101,1,1,21,12,01,4,15,00015,0
3,02,1R,000101,1,1,21,12,01,4,16,00011,0
3,02,1R,000101,1,1,21,12,01,4,17,00014,0
3,02,1R,000101,1,1,21,12,01,4,18,00005,0
3,02,1R,000101,1,1,21,12,01,4,19,00004,0
3,02,1R,000101,1,1,21,12,01,4,20,00010,0
3,02,1R,000101,1,1,21,12,01,4,21,00004,0
3,02,1R,000101,1,1,21,12,01,4,22,00004,0
```

- B. When the daily record form is chosen, the file will be arranged as the original file sequence except that each variable (column) is separated by the comma symbol (,) as illustrated below.

## 1. Column Header

Record\_Type,State\_Code,F\_System,Station\_Id,Travel\_Dir,Travel\_Lane,Year\_R  
ecord,Month\_Record,Day\_Record,Day\_of\_Week,Hour\_00,Hour\_01,Hour\_03,  
Hour\_04,Hour\_05,Hour\_06,Hour\_07,Hour\_08,Hour\_09,Hour\_10,Hour\_11,  
Hour\_12,Hour\_13,Hour\_14,Hour\_15,Hour\_16,Hour\_17,Hour\_18,Hour\_19,  
Hour\_20,Hour\_21,Hour\_22,Hour23,Restrictions

## 2. Example - The following shows an example.

```
Record_Type,State_Code,F_System,Station_Id,Travel_Dir,Travel_Lane,Year_R  
ecord,Month_Record,Day_Record,Day_of_Week,Hour_00,Hour_01,Hour_03,Hour_04,Hour_05,Hour_06,Hour_07,Hour_08,Hour_09,Hour_10,Hour_11,Hour_12,Hour_13,Hour_14,Hour_15,Hour_16,Hour_17,Hour_18,Hour_19,Hour_20,Hour_21,Hour_22,Hour23,Restrictions  
3,02,1R,000101,1,1,21,12,01,4,00007,00005,00008,00002,00003,00010,00004,00005,00009,00007,00014,00014,00015,00017,00015,00011,00014,00005,00004,00010,00013,0  
3,02,1R,000101,1,1,21,12,02,5,00004,00005,00004,00008,00000,00001,00004,00010,00009,00005,00005,00015,00018,00011,00009,00009,00013,0  
3,02,1R,000101,1,1,21,12,03,6,00008,00002,00004,00005,00002,00003,00005,00006,00015,00016,00028,00027,00018,00025,00021,00013,00008,00013,00007,0  
3,02,1R,000101,1,1,21,12,04,7,00001,00008,00003,00000,00001,00006,00005,00004,00014,00013,00019,00019,00029,00019,00027,00018,00012,00017,00017,00014,00009,0  
3,02,1R,000101,1,1,21,12,05,1,00003,00001,00001,00002,00001,00008,00016,00016,00014,00024,00028,00025,00029,00021,00025,00018,00010,00011,0  
3,02,1R,000101,1,1,21,12,06,2,00006,00007,00006,00002,00006,00001,00009,00010,00012,00013,00008,00023,00026,00013,00015,00018,00017,00010,00011,00006,00014,0
```

## C. Zipped file – all converted files are zipped together as one file. The following example shows zipped results.

Name	Size	Type	Modified	Attributes	Fold
AK_DEC_2021 (TMAS).VOL	10 MB	VOL File	2/13/2023 12:49 PM	(0666)	
AL_DEC_2021 (TMAS).VOL	30 MB	VOL File	2/13/2023 12:49 PM	(0666)	
AR_DEC_2021 (TMAS).VOL	1,836 KB	VOL File	2/13/2023 12:49 PM	(0666)	
AZ_DEC_2021 (TMAS).VOL	42 MB	VOL File	2/13/2023 12:49 PM	(0666)	
CA_DEC_2021 (TMAS).VOL	11 MB	VOL File	2/13/2023 12:49 PM	(0666)	
CO_DEC_2021 (TMAS).VOL	7,069 KB	VOL File	2/13/2023 12:49 PM	(0666)	
CT_DEC_2021 (TMAS).VOL	2,358 KB	VOL File	2/13/2023 12:49 PM	(0666)	
DC_DEC_2021 (TMAS).VOL	135 KB	VOL File	2/13/2023 12:49 PM	(0666)	
DE_DEC_2021 (TMAS).VOL	2,323 KB	VOL File	2/13/2023 12:49 PM	(0666)	
FL_DEC_2021 (TMAS).VOL	36 MB	VOL File	2/13/2023 12:49 PM	(0666)	
GA_DEC_2021 (TMAS).VOL	27 MB	VOL File	2/13/2023 12:49 PM	(0666)	
HI_DEC_2021 (TMAS).VOL	8,551 KB	VOL File	2/13/2023 12:49 PM	(0666)	
IA_DEC_2021 (TMAS).VOL	13 MB	VOL File	2/13/2023 12:49 PM	(0666)	
ID_DEC_2021 (TMAS).VOL	19 MB	VOL File	2/13/2023 12:49 PM	(0666)	
IL_DEC_2021 (TMAS).VOL	5,853 KB	VOL File	2/13/2023 12:49 PM	(0666)	
IN_DEC_2021 (TMAS).VOL	11 MB	VOL File	2/13/2023 12:49 PM	(0666)	
KS_DEC_2021 (TMAS).VOL	8,543 KB	VOL File	2/13/2023 12:49 PM	(0666)	
KY_DEC_2021 (TMAS).VOL	7,479 KB	VOL File	2/13/2023 12:49 PM	(0666)	
LA_DEC_2021 (TMAS).VOL	943 KB	VOL File	2/13/2023 12:49 PM	(0666)	
MA_DEC_2021 (TMAS).VOL	35 MB	VOL File	2/13/2023 12:49 PM	(0666)	
MD_DEC_2021 (TMAS).VOL	7,207 KB	VOL File	2/13/2023 12:49 PM	(0666)	
ME_DEC_2021 (TMAS).VOL	5,247 KB	VOL File	2/13/2023 12:49 PM	(0666)	

## How to Use the Tool

### 1. Setup Python environment in your local PC (You do not need Administrative Privilege)

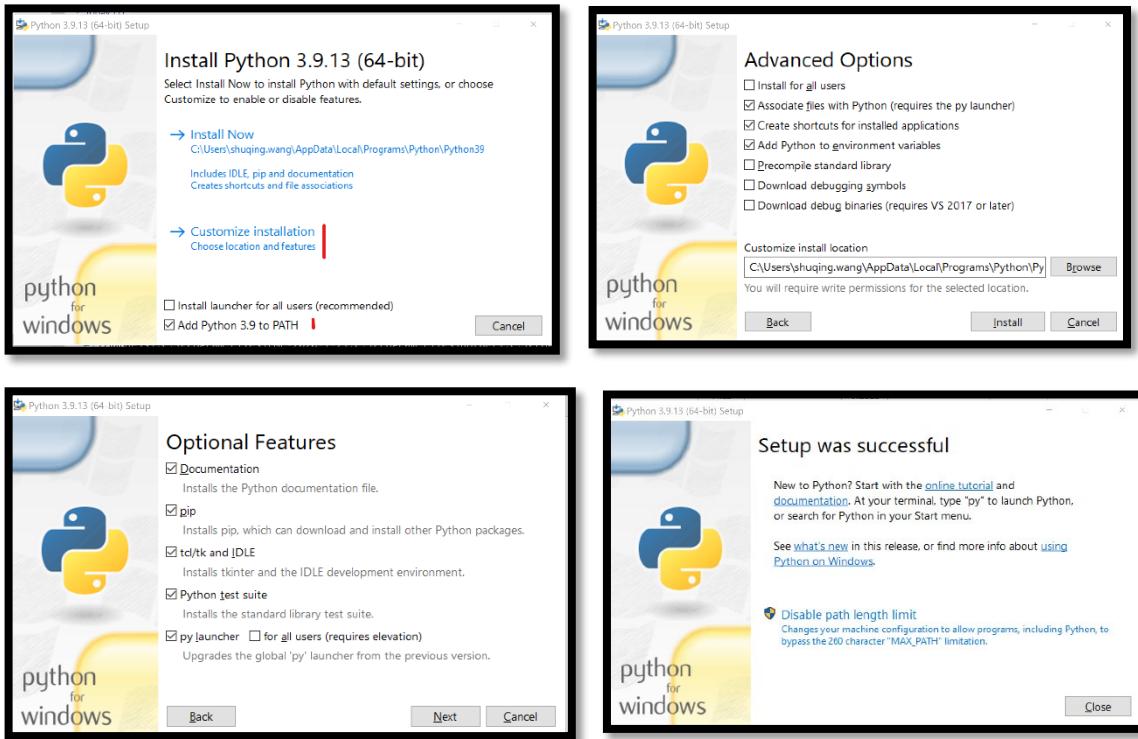
The tool is developed by using Python. To run it, you need to setup the Python environment first. Please follow the steps below to setup the Python environment in your computer. If you have already done so, or your Python environment is pre-established, please skip this, and go to step 2.

#### a) Download Python 3.9.13 64 bit edition at

<https://www.python.org/downloads/release/python-3913/>. The filename should be python-3.9.13-amd64.exe. Note: the latest version of Python is 3.11, and this

tool is compatible with it. You are free to download and use the latest version if you do not have any other Python tool depending on version 3.9.

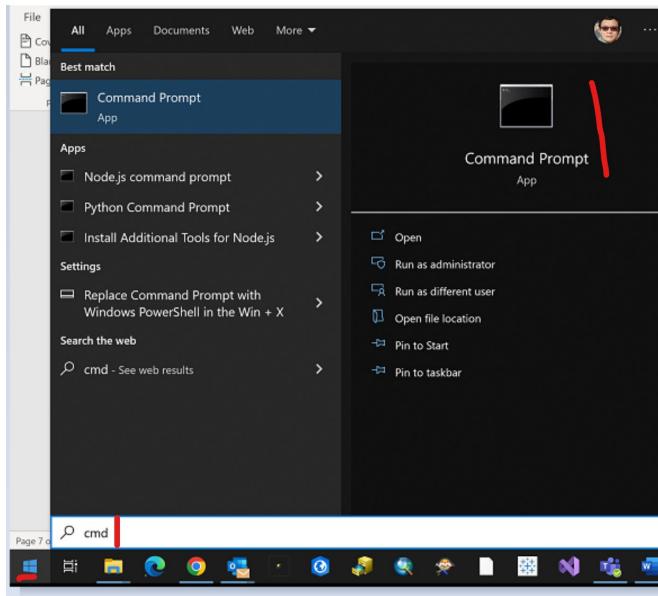
- b) Install Python by clicking python-3.9.13-amd64.exe. When running, use **Customize Installation** and **match the options shown in the diagrams below (pay special attention to matching various options)** to install it. This enables a free installation without the need for Administrator privilege and is free to uninstall later



- c) Verify the Python installation. Once the **Setup was successful** message box is popped up, which indicates the installation succeeded, click Close. However, we need to verify it.

Please follow the steps below to verify the installation.

Click Windows Start menu and enter **cmd** and press enter. This will open a Command window as shown on the right below.



Enter **python -V** in the command line. If it prints out Python 3.9.13, it means the installation succeeded, and you are ready to run your own Python code.

```
C:\>cd temp  
C:\temp>python -V  
Python 3.9.13  
C:\temp>
```

The screenshot shows a Command Prompt window with the title 'Command Prompt'. The user has entered the command 'python -V'. The output of the command, 'Python 3.9.13', is displayed in the window. A red arrow points to the version number '3.9.13'.

- d) Install Pandas module. Pandas is a powerful and widely used data processing module. It provides Databrick like functionalities to process huge data, plus machine learning with different algorithms. This tool is developed by using Pandas for Python. You need to install it to your Python environment if you have not yet done so.

```
H:\>python -V  
Python 3.9.13  
H:\>c:  
C:\>cd\  
C:\>pip install pandas
```

The screenshot shows a Command Prompt window with the title 'Command Prompt'. The user has entered the command 'pip install pandas'. The output shows the progress of the package installation. A red arrow points to the end of the command line where the package name is specified.

Open a CMD window as mentioned above and Use **pip install pandas** to install pandas.

2. Create a folder called “**up**” or (any other named folder) as in the example **c:\temp\up** in your local machine and download the tool **rvd.py** .
3. Download the desired Zipped traffic volume data file from <https://www.fhwa.dot.gov/policyinformation/tables/tmasdata/> by specifying year and month to your computer storage drive/folder. The following screen shot shows the website. You can download the volume data of a month by clicking the month title under a year.



4. Run the following command in your folder

```
Command Prompt - python rvd.py
C:\temp\up>dir
Volume in drive C is Windows
Volume Serial Number is 8CD3-A20A

Directory of C:\temp\up

02/03/2023  10:24 AM    <DIR>          .
02/03/2023  10:24 AM    <DIR>          ..
02/03/2023  07:48 AM      29,145,902 dec_2021_ccs_data.zip
02/03/2023  10:09 AM      80,883,019 dec_2021_ccs_data_converted.zip
02/03/2023  10:17 AM      28,166,408 jun_2019_ccs_data.zip
02/03/2023  10:18 AM      28,563,865 jun_2019_ccs_data_converted.zip
02/02/2023  09:42 AM      26,568,568 jun_2021_ccs_data.zip
02/01/2023  03:56 PM      1,757,433 Readme First.docx
02/03/2023  10:02 AM            7,178 rvd.py
                           7 File(s)   195,092,373 bytes
                           2 Dir(s)  175,720,767,488 bytes free

C:\temp\up>python rvd.py
Please enter the original zipped data file: jun_2021_ccs_data.zip
Do you want to convert a day record into 24 hour records? Enter Y for Yes, any other key for No:Y
```

5. Enter the input Zip file name as shown above (note: if the zip file is not the in the same folder, you must enter the full path name). Then enter Y to convert daily record into hourly record. The following message will be prompted, listing your input zip file, brief information about each data file in the zip file such as if it has

headers, whether is delimited by |, and the original/after unpivoted number of records. As a quick check, the total number of records after unpivoted is always 24 times of original records. In the following output examples, Header=True/False tells if a file has a header or not, and Pipe=True/False tells if a file is | separated or not.

```
C:\temp\up>python rvd.py
Please enter the original zipped data file:jun_2021_ccs_data.zip
Do you want to convert a day record into 24 hour records? Enter Y for Yes, any other key for No:Y
Original zip file:jun_2021_ccs_data.zip
Temporary unzip folder:C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmp6elrcwai
Converted:AK_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 10810, Total Records after conversion = 259440
Converted:AL_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 29288, Total Records after conversion = 702912
Converted:AR_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 2566, Total Records after conversion = 61584
Converted:AZ_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 23511, Total Records after conversion = 564264
Converted:CA_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 14509, Total Records after conversion = 348216
Converted:CO_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 6608, Total Records after conversion = 158592
Converted:CT_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 1976, Total Records after conversion = 47424
Converted:DC_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 360, Total Records after conversion = 8640
Converted:DE_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 2663, Total Records after conversion = 63912
Converted:FL_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 32279, Total Records after conversion = 774696
Converted:GA_JUN_2021 (TMAS).VOL Header=False, Pipe=True, Total Records = 28566, Total Records after conversion = 685584
Converted:HI_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 9371, Total Records after conversion = 224904
Converted:IA_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 13950, Total Records after conversion = 334800
Converted:ID_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 21400, Total Records after conversion = 513600
Converted:IL_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 5156, Total Records after conversion = 123744
Converted:IN_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 8834, Total Records after conversion = 212016
Converted:KS_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 7910, Total Records after conversion = 189840
```

```
C:\temp\up>
Converted:NY_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 13378, Total Records after conversion = 321072
Converted:OH_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 21029, Total Records after conversion = 504696
Converted:OK_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 10099, Total Records after conversion = 242376
Converted:OR_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 9079, Total Records after conversion = 217896
Converted:PA_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 10843, Total Records after conversion = 260232
Converted:RI_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 5190, Total Records after conversion = 124560
Converted:SC_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 14641, Total Records after conversion = 351384
Converted:SD_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 3904, Total Records after conversion = 93696
Converted:TN_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 0, Total Records after conversion = 0
Converted:TX_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 17196, Total Records after conversion = 412704
Converted:UT_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 4771, Total Records after conversion = 114504
Converted:VA_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 25188, Total Records after conversion = 604512
Converted:VT_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 3427, Total Records after conversion = 82248
Converted:WA_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 21079, Total Records after conversion = 505896
Converted:WI_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 33402, Total Records after conversion = 801648
Converted:WV_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 3146, Total Records after conversion = 75504
Converted:WY_JUN_2021 (TMAS).VOL Header=True, Pipe=True, Total Records = 11898, Total Records after conversion = 285552
C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmp6elrcwai removed.
C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmpjlpwoxfv removed.
Done. All converted files are zipped in jun_2021_ccs_data_converted.zip
```

6. Get the final product and run for another month. All each individual state data file within the original zip file will be processed and rezipped together as a new zip file named the same as the original but with a suffix of **\_converted**. The following shows an example. If you have another month file needs to process, repeat steps from 3.

```

Command Prompt
Done. All converted files are zipped in jun_2021_ccs_data_converted.zip

C:\temp\up>dir
Volume in drive C is Windows
Volume Serial Number is 8CD3-A20A

Directory of C:\temp\up

02/03/2023 10:31 AM <DIR> .
02/03/2023 10:31 AM <DIR> ..
02/03/2023 07:48 AM 29,145,902 dec_2021_ccs_data.zip
02/03/2023 10:09 AM 80,883,019 dec_2021_ccs_data_converted.zip
02/03/2023 10:17 AM 28,166,408 jun_2019_ccs_data.zip
02/03/2023 10:18 AM 28,563,865 jun_2019_ccs_data_converted.zip
02/02/2023 09:42 AM 26,568,568 jun_2021_ccs_data.zip
02/03/2023 10:31 AM 72,982,428 jun_2021_ccs_data_converted.zip
02/01/2023 03:56 PM 1,757,433 Readme First.docx
02/03/2023 10:02 AM 7,178 rvd.py
8 File(s) 268,074,801 bytes
2 Dir(s) 175,668,076,544 bytes free

C:\temp\up>

```

Now you are done and in possession of the volume data in a new format.

- If you would like to keep using daily record instead of breaking on day volume counts into 24 hourly records, but only want to unify the column header and delimitation. You can run the tool the same way as stated in step 3, but only to enter **N** to the second question as shown below. Note that the total records number is the same in this case. The last screenshot shows an example of a converted file.

```

Command Prompt
C:\temp\up>python rvd.py
Please enter the original zipped data file:jun_2019_ccs_data.zip
Do you want to convert a day record into 24 hour records? Enter Y for Yes, any other key for No:N
Original zip file:jun_2019_ccs_data.zip
Temporary unzip folder:C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmp236dt9nj
Converted:AK0619.VOL Header=False, Pipe=False, Total Records = 9289, Total Records after conversion = 9289
Converted:AL0619.VOL Header=False, Pipe=False, Total Records = 26438, Total Records after conversion = 26438
Converted:AR0619.VOL Header=False, Pipe=False, Total Records = 3500, Total Records after conversion = 3500
Converted:AZ0619.VOL Header=False, Pipe=False, Total Records = 24105, Total Records after conversion = 24105
Converted:CA0619.VOL Header=False, Pipe=False, Total Records = 16406, Total Records after conversion = 16406
Converted:CO0619.VOL Header=False, Pipe=False, Total Records = 6644, Total Records after conversion = 6644
Converted:CT0619.VOL Header=False, Pipe=False, Total Records = 2280, Total Records after conversion = 2280
Converted:DC0619.VOL Header=False, Pipe=False, Total Records = 360, Total Records after conversion = 360
Converted:DE0619.VOL Header=False, Pipe=False, Total Records = 4340, Total Records after conversion = 4340
Converted:FL0619.VOL Header=False, Pipe=False, Total Records = 48052, Total Records after conversion = 48052
Converted:GA0619.VOL Header=False, Pipe=False, Total Records = 41899, Total Records after conversion = 41899
Converted:OR0619.VOL Header=False, Pipe=False, Total Records = 10418, Total Records after conversion = 10418
Converted:PA0619.VOL Header=False, Pipe=False, Total Records = 9473, Total Records after conversion = 9473
Converted:RI0619.VOL Header=False, Pipe=False, Total Records = 5034, Total Records after conversion = 5034
Converted:SC0619.VOL Header=False, Pipe=False, Total Records = 19183, Total Records after conversion = 19183
Converted:SD0619.VOL Header=False, Pipe=False, Total Records = 4535, Total Records after conversion = 4535
Converted:TN0619.VOL Header=False, Pipe=False, Total Records = 4172, Total Records after conversion = 4172
Converted:TX0619.VOL Header=False, Pipe=False, Total Records = 19870, Total Records after conversion = 19870
Converted:UT0619.VOL Header=False, Pipe=False, Total Records = 14116, Total Records after conversion = 14116
Converted:VA0619.VOL Header=False, Pipe=False, Total Records = 36251, Total Records after conversion = 36251
Converted:VT0619.VOL Header=False, Pipe=False, Total Records = 3258, Total Records after conversion = 3258
Converted:WA0619.VOL Header=False, Pipe=False, Total Records = 32881, Total Records after conversion = 32881
Converted:WI0619.VOL Header=False, Pipe=False, Total Records = 30680, Total Records after conversion = 30680
Converted:WV0619.VOL Header=False, Pipe=False, Total Records = 3706, Total Records after conversion = 3706
Converted:WY0619.VOL Header=False, Pipe=False, Total Records = 12454, Total Records after conversion = 12454
C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmp236dt9nj removed. Zipping started...
C:\Users\SHUQIN~1.WAN\AppData\Local\Temp\tmpbc1fijm4 removed.
Done. All converted files are zipped in jun_2019_ccs_data_converted.zip

C:\temp\up>

```



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\_End\_